

**REMARKS**

Claims 1-4 and 18-44 are pending in this application. By this Amendment, claims 1, 3, 18, 24 and 28-41 are amended, claims 5-17 are canceled without prejudice or disclaimer and new claims 42-44 are added. Various amendments are made to the claims for clarity, and are unrelated to issues of patentability. Further, independent claim 5 (and its dependent claims 6-17) are canceled merely to avoid extra claim fees.

This paper should serve as a Submission under 37 C.F.R. §1.114. Applicants have previously made arguments in their September 8 response. Applicants respectfully request that these arguments and the following arguments be properly addressed. Several of the previous arguments have been readdressed in the following remarks.

The Office Action (dated March 9, 2004) rejects claims 1, 3, 18, 24 and 28-41 under 35 U.S.C. §112, first paragraph. This rejection is believed to have been withdrawn as stated in the September 8 response.

The Office Action also rejects claims 1-4, 18, 20-27 and 30-39 under 35 U.S.C. §102(e) by U.S. Patent 6,526,215 to Hirai et al. (hereafter Hirai). The Office Action also rejects claims 19, 40 and 41 under 35 U.S.C. §103(a) over Hirai and U.S. Patent 5,956,026 to Ratakonda. The Office Action also rejects claims 28 and 29 under 35 U.S.C. §102(e) by Ratakonda. The rejections are respectfully traversed with respect to the pending claims.

Independent claim 1 recites selecting a key region from each of the plurality of sections and combining the selected key region from each of the plurality of sections to form a synthetic

key frame. Independent claim 1 also recites each selected key region corresponding to a portion of a frame smaller than a total frame size.

As discussed during the April 22 personal interview, Hirai does not teach or suggest the key region and the synthetic key frame as recited in independent claim 1. That is, the present application sets forth that a synthetic key frame may be created by combining regions having meaningful information or key frames in order to represent a specific segment in a video stream. See col. 9, lines 6-9. The present application also discusses that a key region may be a region that is capable of concisely representing contents of a particular segment such as a text, human face, news icon. See page 2, lines 20-22.

As discussed in the personal interview, Hirai does not teach or suggest the key region or synthetic key frame. Hirai also does not teach or suggest each selected key region corresponding to a portion of a frame smaller than a total frame size. The Office Action appears to assert that Hirai is being relied upon because it divides moving data pictures into different scenes in order to form M-icons. Hirai's Figure 10 shows a plurality of M-icons arranged on a screen. However, each of these M-icons is not a key region, as recited in independent claim 1. Thus, there is no suggestion for combining selected key regions from each of a plurality of sections in order to form a synthetic key frame. Further, each M-icon is not a portion of a frame smaller than a total frame size.

More specifically, Hirai discloses dividing a video stream into scenes or cuts. Each of the cuts is one frame. In other words, the M-icon represents an entire frame from a video stream.

See col. 2, lines 45-50; col. 4, lines 48-50; col. 8, lines 35-43 and col. 9, lines 1-5. Furthermore, col. 2, lines 2-6 sets forth that the M-icon is produced by thinning out data from each frame (such as using a compression technique). Clearly, Hirai's M-icons are not key regions from a video stream. Further, Hirai's M-icons are not a portion of a frame smaller than a total frame size.

During the personal interview, the Examiners referenced Hirai's col. 15, lines 43-49. However, the sentence relied upon in this section merely states that an icon is indicative of an abstract. There is no suggestion that the M-icon is a key region. For at least the reasons set forth above, applicants submit that Hirai's M-icon represents a frame (or cut) of a video sequence. Absent explicit language within Hirai, it is improper to hypothesize regarding the meaning of M-icon. Applicants have identified specific language (identified above) regarding an M-icon being a frame of video. This is not a key frame or a portion smaller than a total frame size. As such, there is no suggestion for selecting a key region from each of a plurality of sections as recited in independent claim 1. Further, there is no suggestion for each selected key region corresponding to a portion of a frame smaller than a total frame size.

Furthermore, since there is no suggestion in Hirai for the selection of a key region, there is no suggestion for combining the selected features in order to form a synthetic key frame as recited in independent claim 1. Hirai has no suggestion for a synthetic key frame. As discussed at the personal interview, Hirai's FIG. 10 does not show a synthetic key frame. Stated differently, independent claim 1 recites selecting a key region from each of the plurality of

sections and combining the selected key region from each of the plurality of sections to form a synthetic key frame. Hirai does not teach the selecting and combining to form a synthetic key frame. Thus, independent claim 1 defines patentable subject matter.

Each of independent claims 18 and 24 define patentable subject matter for at least similar reasons set forth above. However, applicants would respectfully like to point out that each of these claims may include different claim language and may represent different features.

Still further, independent claim 18 recites each key region corresponds to a portion of a frame smaller than a total frame size and assigning the synthetic key frame to a key image locator, a hierarchical summary list for describing lower summary structures, and structural information of the video stream. As similarly stated above, Hirai does not suggest that each key region corresponds to a portion of a frame smaller than a total frame size. Hirai also does not suggest assigning a synthetic key frame to a key image locator, a hierarchical summary list for describing lower summary structures, and structural information of the video stream. For example, Hirai has no suggestion that a screen showing a plurality of M-icons may be assigned to a key image locator, a hierarchical summary list for describing lower summary structures and structural information of the video stream. The Office Action's reference to Hirai's col. 11, lines 9-15 does not suggest the features relating to the key image locator and hierarchical summary list for describing lower summary structure. Thus, independent claim 18 defines patentable subject matter at least for this additional reason.

Independent claim 28 also recites dividing a video stream into a plurality of streams where each section includes a plurality of frames, and synthesizing a key region representing content of each section into one image, to generate a synthetic key frame. Independent claim 28 also recites that each selected key region corresponding to a portion of a frame smaller than a total frame size. Independent claim 28 further recites providing a user interface to a predetermined display to browse a video related to the generated synthetic key frame, selecting the synthetic key frame according to an input of the user and reproducing a segment represented by the selected synthetic key frame. As discussed during the personal interview, Ratakonda does not teach or suggest these features as Ratakonda does not suggest a key region or a synthetic key frame.

Additionally, new independent claim 42 recites a plurality of hierarchical summary element information structures, wherein each hierarchical summary element information structure includes: a key image locator; a list of sub hierarchical summary element information structures; a summary level; and a fidelity indicating how well the hierarchical summary element information is represented by a hierarchical summary element information in a higher level. The applied references do not teach or suggest these features. The Office Action appears to address features of fidelity with respect to several dependent claims. However, none of the citations to the applied references relate to the specifically claimed fidelity features. Additionally, none of the citations relates to a fidelity indicating how well the hierarchical summary element information is represented by a hierarchical summary element information in a higher level as

recited in new independent claim 42. The applied references do not teach or suggest the hierarchical summary information. Thus, the applied references cannot suggest the fidelity indicating how well the hierarchical summary information is represented.

For at least the reasons set forth above, each of independent claims 1, 18, 24, 28 and 42 define patentable subject matter. Claims 2-4, 30 and 31 depend from claim 1, claims 19-23 and 36-37 depend from claim 18, claims 25-27 and 38-39 depend from claim 24, claims 29 and 40-41 depend from claim 28 and claims 43 and 44 depend from claim 42, and therefore define patentable subject matter for at least this reason.

In addition, each of the dependent claims recites features that further and independently distinguish over the applied references. For example, dependent claim 19 recites the key image locator is a data structure for designating an image using a key region locator, a key frame locator and a synthetic key frame locator. The applied references do not suggest these features.

For at least the reasons set forth above, each of claims 1-4 and 18-44 define patentable subject matter. Withdrawal of the outstanding rejections are respectfully requested.

### **CONCLUSION**

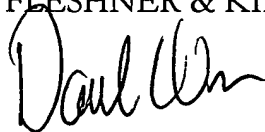
In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-4 and 18-44 are earnestly solicited. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **David C. Oren**, at the telephone number listed below.

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Reply to Office Action dated March 9, 2004

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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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